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(FILE 'HOME' ENTERED AT 09:03:21 ON 12 AUG 2008)

FILE 'REGISTRY' ENTERED AT 09:03:43 ON 12 AUG 2008
L1 STRUCTURE UPLOADED
L2 17 S L1
L3 2283 S L1 FULL

FILE 'CAPLUS' ENTERED AT 09:04:16 ON 12 AUG 2008
L4 1115 S L3
E GRAM+ALL/CT
E BACTERIA+ALL/CT
L5 15 S L4 AND BACTERIA
L6 10 S L5 AND PY<=2004

FILE 'CAPLUS' ENTERED AT 09:33:51 ON 12 AUG 2008
L7 2485 S MANNOSIDE
L8 23 S L7 AND BUTYL
L9 1 S L8 AND BACTERIA
L10 58 S L7 AND ALKYL
L11 2 S L10 AND BACTERIA
L12 21 S BOUCKAERT J/AU
E BOUCKAERT J/AU
L13 56 S E3 OR E11
L14 12 S L13 AND MANNOS?
L15 3 S L13 AND MANNOSIDE
L16 12 S L13 AND MANNOSE
L17 7 S L16 AND PY<=2004
E BERGLUND J/AU
L18 15 S E3 OR E15
L19 2 S L18 AND MANNOSIDE
L20 2 S L18 AND MANNOSE
E DEGREVE H/AU
E DE GREVE H/AU
L21 72 S E3 OR E4
L22 3 S L21 AND MANNOSIDE
L23 0 S L22 AND PY<=2004
E KNIGHT S/AU
L24 68 S E3 OR E60 OR E61
L25 2 S L24 AND MANNOSIDE
L26 70725 S HIS

FILE 'REGISTRY' ENTERED AT 11:40:38 ON 12 AUG 2008
L27 STRUCTURE UPLOADED
L28 50 S L27
L29 STRUCTURE UPLOADED
L30 11 S L29
L31 1607 S L29 FULL
L32 STRUCTURE UPLOADED
L33 1 S L32
L34 64 S L32 FULL

FILE 'CAPLUS' ENTERED AT 11:45:26 ON 12 AUG 2008
L35 513 S L34
L36 373 S L35 AND ETHYL
L37 281 S L36 AND PY<=2003
L38 11 S L37 AND MANNOPYRANOSIDE
L39 0 S L38 AND BACTERIA

10594225

L40 1 S L37 AND BACTERIA

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=> d bib abs hit 1-11

L38 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2002:694638 CAPLUS <<LOGINID::20080812>>
DN 137:366262
TI Inhibition of adhesion of type 1 fimbriated Escherichia coli to highly mannosylated ligands
AU Nagahori, Noriko; Lee, Reiko T.; Nishimura, Shin-Ichiro; Page, Daniel; Roy, Rene; Lee, Yuan C.
CS Laboratory of Bioorganic Chemistry & Glycoclusters, Division of Biological Sciences, Graduate School of Science, Hokkaido University, Sapporo, 060-0810, Japan
SO ChemBioChem (2002), 3(9), 836-844
CODEN: CBCHFX; ISSN: 1439-4227
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB The inhibitory potencies of a number of mannosides, di- and trivalent mannosides, a set of mannose-terminating dendrimers, and five types of mannose-bearing neoglycoproteins were determined by using a binding assay that measures the binding of 125I-labeled, highly mannosylated neoglycoprotein to a type 1 fimbriated Escherichia coli (K12) strain in suspension. The IC50 values (the concentration of inhibitor that causes 50% reduction in the bound
125I-ligand to E. coli) obtained by this method were much lower than the equivalent values obtained by hemagglutination or in assays that involve microplate immobilization. Two important factors that strongly influence the affinity to E. coli adhesin are: 1) the presence of an α-oriented aglycon that has a long aliphatic chain or an aromatic group immediately next to the glycosyl oxygen, and 2) the presence of multiple mannosyl residues that can span a distance of 20 nm or longer on a relatively inflexible structure. The two best inhibitors, which are a highly mannosylated neoglycoprotein with the longest linking arm between a mannose and protein amino group and the largest mannosylated dendrimer (fourth generation), exhibited sub-nM IC50 values.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
SO ChemBioChem (2002), 3(9), 836-844
CODEN: CBCHFX; ISSN: 1439-4227
IT 617-04-9, Methyl α-D- mannopyranoside 3396-99-4, Methyl α D galactoside 9001-57-4, Invertase 10357-27-4, p-Nitrophenyl α D Mannopyranoside 22277-65-2, Methyl β-D-mannopyranoside 35599-02-1, p-Nitrophenyl β D Mannopyranoside 59121-69-6, α D Mannopyranoside. Ethyl 72812-44-3 129460-87-3 134448-24-1 142925-34-6, Ethyl β-D-mannopyranoside 145853-96-9 187147-04-2 187147-06-4 187284-90-8 188010-22-2 203861-78-3 263547-00-8 285997-89-9 475491-50-0 475491-52-2 475491-53-3 475491-54-4 475491-56-6
RL: BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(inhibition of adhesion of type 1 fimbriated Escherichia coli to highly mannosylated ligands)

L38 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 2000:818970 CAPLUS <<LOGINID::20080812>>
DN 134:101082
TI Monosaccharide-alkyl glycoside glass phases: plasticization with hydrophilic and hydrophobic molecules

10594225

AU Gill, Iqbal; Valivety, Rao
CS Biotransformation Dep., Roche Vitamins Inc., Nutley, NJ, 07110-1199, USA
SO Angewandte Chemie, International Edition (2000), 39(21), 3801-3804
CODEN: ACIEF5; ISSN: 1433-7851
PB Wiley-VCH Verlag GmbH
DT Journal
LA English
AB A novel class of glasses derived from mixts. of monosaccharides and their alkyl glycosides, capable of solubilizing a variety of hydrophilic and -phobic compds. to form isotropic liqs. was demonstrated. The possibility of engineering the glass transition temperature and plasticization profiles of the glasses by varying the alkyl glycosides used for glass formation, the ratios of the glass-forming components, and the amts. of modifiers such as water and lower alcs. was shown.
RE.CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT
SO Angewandte Chemie, International Edition (2000), 39(21), 3801-3804
CODEN: ACIEF5; ISSN: 1433-7851
IT 50-99-7D, D-Glucose, organic glasses containing, reactions 59-23-4D, D-Galactose, organic glasses containing, reactions 100-51-6D, Benzyl alcohol, organic glasses containing 106-24-1D, Geraniol, organic glasses containing 106-25-2D, Nerol, organic glasses containing 111-03-5D, organic glasses containing 121-33-5D, Vanillin, organic glasses containing 123-31-9D, Hydroquinone, organic glasses containing 123-78-4D, Sphingosine, organic glasses containing 127-41-3D, α-Ionone, organic glasses containing 141-22-0D, Ricinoleic acid, organic glasses containing 143-62-4D, Digitoxigenin, organic glasses containing 501-96-2D, organic glasses containing 556-52-5D, Glycidol, organic glasses containing 821-09-0D, Pent-4-en-1-ol, organic glasses containing 868-77-9D, 2-Hydroxyethyl methacrylate, organic glasses containing 2495-96-7D, organic glasses containing 3198-49-0D, Ethyl β-D-glucopyranoside, organic glasses containing 3458-28-4D, D-Mannose, organic glasses containing 7512-17-6D, organic glasses containing 15486-24-5D, Ethyl α-D-galactopyranoside, organic glasses containing 18997-88-1D, Ethyl β-D-galactopyranoside, organic glasses containing 19467-01-7D, Ethyl α-D-glucopyranoside, organic glasses containing 25320-91-6D, Propyl α-D-glucopyranoside, organic glasses containing 34384-77-5D, Propyl β-D-glucopyranoside, organic glasses containing 39824-08-3D, Propyl β-D-galactopyranoside, organic glasses containing 62178-32-9D, Propyl α-D-galactopyranoside, organic glasses containing 63223-88-1D, Propyl β-D- mannopyranoside, organic glasses containing 70832-36-9D, organic glasses containing 136194-92-8D, Aloc-ser-ome, organic glasses containing 142925-34-6D, Ethyl β-D- mannopyranoside, organic glasses containing
RL: PRP (Properties); RCT (Reactant); RACT (Reaction or reagent)
(preparation of monosaccharide-alkyl glycoside glass phases)

L38 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1996:563441 CAPLUS <<LOGINID::20080812>>
DN 125:219733

OREF 125:41099a,41102a
TI Process for the preparation of glycosides using glycosidases from ciliates
IN Kiy, Thomas; Hoersch, Brigitte; Marquardt, Ruediger
PA Hoechst A.-G., Germany
SO Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 725144	A1	19960807	EP 1996-101309	19960131 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	DE 19503649	A1	19960808	DE 1995-19503649	19950206 <--
	CA 2168837	A1	19960807	CA 1996-2168837	19960205 <--
	JP 08238097	A	19960917	JP 1996-20285	19960206 <--
PRAI	DE 1995-19503649	A	19950206		

OS MARPAT 125:219733
AB A process is claimed for the production of glycosides by enzymic glycosylation using α- and β-glycosidases from holotrichous ciliates, especially from Hymenostomatida. Glycosidases from holotrichous ciliates are well suited for enzymic synthesis of alkyl glycosides, glycopeptides, and di- or oligosaccharides. Preferable glycosyl donors are nitrophenyl glycosides, glycosyl fluorides, or disaccharides and preferable acceptors are short chain alcs., polyhydroxy compds., especially monosaccharides, or protected hydroxy amino acids or peptides.
PI EP 725144 A1 19960807

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 725144	A1	19960807	EP 1996-101309	19960131 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
	DE 19503649	A1	19960808	DE 1995-19503649	19950206 <--
	CA 2168837	A1	19960807	CA 1996-2168837	19960205 <--
	JP 08238097	A	19960917	JP 1996-20285	19960206 <--

IT 1198-82-9P, Methyl β-D-Fucopyranoside 1824-94-8P, Methyl β-D-Galactopyranoside 18997-88-1P, Ethyl β-D-Galactopyranoside 136198-41-9P 181147-77-3P 181147-79-5P 181230-18-2P
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation of glycosides using glycosidases from ciliates)
IT 97-30-3P, Methyl α-D-Glucopyranoside 3946-01-8P 19467-01-7P, Ethyl α-D-Glucopyranoside 35061-50-8P 52455-62-6P 62205-57-6P 146453-36-3P 181147-75-1P 181147-76-2P 181147-78-4P
RL: BMF (Bioindustrial manufacture); BPN (Biosynthetic preparation); PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(preparation of glycosides using glycosidases from ciliates)
IT 50-99-7, Glucose, biological studies 58-86-6, D-Xylose, biological studies 64-17-5, Ethanol, biological studies 67-56-1, Methanol, biological studies 71-36-3, 1-Butanol, biological studies 369-07-3, o-Nitrophenyl β-D-Galactopyranoside 1072-86-2, (1R,2R)-trans-1,2-Cyclohexanediol 1226-39-7, p-Nitrophenyl β-D-Fucopyranoside 1676-81-9, Benzyloxycarbonyl-L-Serine methyl ester 3459-18-5 3767-28-0, p-Nitrophenyl α-D-Glucopyranoside 7512-17-6, N-Acetylglucosamine 10357-27-4, p-Nitrophenyl α-D-Mannopyranoside 17996-12-2, 6-N-Benzyloxycarbonylamino-1-hexanol
RL: BPR (Biological process); BSU (Biological study, unclassified); RCT

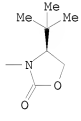
(Reactant); BIOL (Biological study); PROC (Process); RACT (Reactant or reagent)
(preparation of glycosides using glycosidases from ciliates)

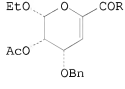
L38 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:991725 CAPLUS <<LOGINID::20080812>>
DN 124:176692
OREF 124:32791a,32794a
TI Synthesis of alkyl β-mannosides from mannobiose by Aspergillus niger β-mannosidase
AU Itoh, Hirotaka; Kamiyama, LYoshi
CS Institute Applied Biochemistry, University Tsukuba, Ibaraki, 305, Japan
SO Journal of Fermentation and Bioengineering (1995), 80(5), 510-12
CODEN: JFBIEX; ISSN: 0922-338X
PB Society for Fermentation and Bioengineering, Japan
DT Journal
LA English
OS CASREACT 124:176692
AB The reaction conditions for synthesis of various alkyl β-mannosides by transmannosylation with Aspergillus niger β-mannosidase were studied. Maximum yield of Me β-mannoside expressed in mol% based on initial mannobiose was 81% in the presence of 50% (volume/volume) methanol. The longer carbon chains were, the less the yield of corresponding mannoside became. Octyl β-mannoside, a new glycoside, was successfully synthesized in a 2 mol% yield in the presence of 905 (volume/volume) octanol.
SO Journal of Fermentation and Bioengineering (1995), 80(5), 510-12
CODEN: JFBIEX; ISSN: 0922-338X
IT 22277-65-2P 63223-88-1P, β-D- Mannopyranoside, propyl
100297-03-8P, β-D- Mannopyranoside, pentyl 140147-38-2P
142925-34-6P, β-D- Mannopyranoside, ethyl
143289-25-2P, β-D- Mannopyranoside, butyl 152141-28-1P,
β-D- Mannopyranoside, hexyl 174061-38-2P
RL: SPN (Synthetic preparation); PREP (Preparation)
(synthesis of alkyl β-mannosides from mannobiose by β-mannosidase)

L38 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1995:654562 CAPLUS <<LOGINID::20080812>>
DN 123:257136
OREF 123:46007a
TI De novo synthesis of enantiopure carbohydrates: preparation of ethyl β-D- and β-L- mannopyranosides by an asymmetrically induced hetero Diels-Alder reaction
AU Zamojski, A.
CS Polish Academy Sciences, Pol.
SO Chemtracts: Organic Chemistry (1995), 8(1), 69-72
CODEN: CMOCEI; ISSN: 0895-4445
PB Data Trace Chemistry Publishers, Inc.
DT Journal; General Review
LA English
AB The title research of L. F. Tietze and A. Montenburck (1994) et al. is reviewed with commentary and 12 refs.
TI De novo synthesis of enantiopure carbohydrates: preparation of ethyl β-D- and β-L- mannopyranosides by an asymmetrically induced hetero Diels-Alder reaction
SO Chemtracts: Organic Chemistry (1995), 8(1), 69-72
CODEN: CMOCEI; ISSN: 0895-4445
AB The title research of L. F. Tietze and A. Montenburck (1994) et

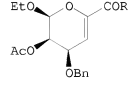
al. is reviewed with commentary and 12 refs.
ST mannopyranoside prepn review; stereoselective Diels Alder sugar review
IT Diels-Alder reaction
Stereochemistry
(preparation of mannopyranosides by an asym. induced hetero Diels Alder reaction)
IT 142925-34-6P 158250-58-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of mannopyranosides by an asym. induced hetero Diels Alder reaction)

L38 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1994:631179 CAPLUS <<LOGINID::20080812>>
DN 121:231179
OREF 121:42175a
TI Inter- and intramolecular hetero-Diels-Alder reactions. Part 48. De-novo synthesis of enantiopure carbohydrates: preparation of ethyl β-D- and β-L- mannopyranosides by an asymmetrically induced hetero Diels-Alder reaction
AU Tietze, Lutz F.; Montenbruck, Andrea; Schneider, Christoph
CS Inst. Org. Chem., Univ. Gottingen, Gottingen, D-37077, Germany
SO Synlett (1994), (7), 509-10
CODEN: SYNLES; ISSN: 0936-5214
DT Journal
LA English
OS CASREACT 121:231179
GI

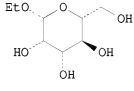
R= 



I



II



IV

AB The synthesis of dihydropyrans I and II based on the asym. 1,6-induced intermol. stereoselective Diels-Alder cycloaddn. of the heterodiene RCOCOCH:CHOBn III and (Z)-AcOCH:CHOEt in the presence of Me2AlCl or TMSOTf is described. A reversal of facial differentiation could be achieved by variation of the Lewis acid. Simple transformation of I and II resp. afforded the desired Et mannopyranoside IV and ent-IV diastereoselectively and in good yield.
TI Inter- and intramolecular hetero-Diels-Alder reactions. Part 48. De-novo

synthesis of enantiopure carbohydrates: preparation of ethyl β-D- and β-L- mannopyranosides by an asymmetrically induced hetero Diels-Alder reaction
SO Synlett (1994), (7), 509-10
CODEN: SYNLES; ISSN: 0936-5214
AB The synthesis of dihydropyrans I and II based on the asym. 1,6-induced intermol. stereoselective Diels-Alder cycloaddn. of the heterodiene RCOCOCH:CHOBn III and (Z)-AcOCH:CHOEt in the presence of Me2AlCl or TMSOTf is described. A reversal of facial differentiation could be achieved by variation of the Lewis acid. Simple transformation of I and II resp. afforded the desired Et mannopyranoside IV and ent-IV diastereoselectively and in good yield.
ST ethoxyethene stereoselective Diels Alder cycloaddn heterodiene; dihydropyran prepn hydroxylation; mannopyranoside
IT Stereochemistry
(of Diels-Alder cycloaddn. of heterodiene with ethoxyethene in synthesis of mannopyranosides)
IT Diels-Alder reaction
(stereoselective, of heterodiene with ethoxyethene in synthesis of mannopyranosides)
IT 158157-94-9P 158157-95-0P 158157-96-1P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in preparation of mannopyranosides)
IT 158157-89-2P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, in synthesis of mannopyranosides)
IT 142925-34-6P 158157-90-5P 158157-91-6P 158157-92-7P
158250-58-9P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 54705-42-9 158157-93-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, in preparation of mannopyranosides)
IT 158157-88-1
RL: PROC (Process)
(stereoselective Diels-Alder cycloaddn. of, with ethoxyethene in synthesis of mannopyranosides)
IT 129751-10-6
RL: PROC (Process)
(stereoselective Diels-Alder cycloaddn. of, with heterodiene in synthesis of mannopyranosides)

L38 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1994:54809 CAPLUS <<LOGINID::20080812>>
DN 120:54809
OREF 120:10019a,10022a
TI Syntheses of β- mannopyranosides by enzymic approaches
AU Taubken, N.; Sauerbrei, B.; Thiem, J.
CS Inst. Org. Chem., Univ. Hamburg, Hamburg, D-2000/13, Germany
SO Journal of Carbohydrate Chemistry (1993), 12(4-5), 651-67
CODEN: JCACDM; ISSN: 0732-8303
DT Journal
LA English
OS CASREACT 120:54809
AB The transmannosylation activity of β-mannosidase from snail and β-galactosidase from Aspergillus oryzae was used for the synthesis of Me, Et, 1-Pr, 2-Pr, 1-Bu, 2-Bu, 1-hexyl, cyclohexyl, and 1-octyl

β-D- mannopyranosides, resp. The regioisomeric specificities and wide substrate acceptance of this galactosidase are demonstrated. Thus, 4-nitrophenyl 4-O-(α-D-glucopyranosyl)-β-D-glucopyranoside, 4-nitrophenyl 2-O-(β-D-glucopyranosyl)-β-D-glucopyranoside, 4-nitrophneyl 2-deoxy-2-N-acetyl-6-O-(2-deoxy-2-N-acetyl-β-D-glucopyranosyl)-β-D-glucopyranoside, 4-nitrophenyl 3-O-(β-D-mannopyranosyl)-α-D- mannopyranoside, and 4-nitrophenyl 4-O-(β-D-mannopyranosyl)-β-D-mannopyranoside were prepared by chemo-enzymic self-transfer reaction.

TI Syntheses of β- mannopyranosides by enzymic approaches

SO Journal of Carbohydrate Chemistry (1993), 12(4-5), 651-67
CODEN: JCACDM; ISSN: 0732-8303

AB The transmannosylation activity of β-mannosidase from snail and β-galactosidase from Aspergillus oryzae was used for the synthesis of Me, Et, 1-Pr, 2-Pr, 1-Bu, 2-Bu, 1-hexyl, cyclohexyl, and 1-octyl β-D- mannopyranosides, resp. The regioisomeric specificities and wide substrate acceptance of this galactosidase are demonstrated. Thus, 4-nitrophenyl 4-O-(α-D-glucopyranosyl)-β-D-glucopyranoside, 4-nitrophenyl 2-O-(β-D-glucopyranosyl)-β-D-glucopyranoside, 4-nitrophneyl 2-deoxy-2-N-acetyl-6-O-(2-deoxy-2-N-acetyl-β-D-glucopyranosyl)-β-D-glucopyranoside, 4-nitrophenyl 3-O-(β-D-mannopyranosyl)-α-D- mannopyranoside, and 4-nitrophenyl 4-O-(β-D-mannopyranosyl)-β-D-mannopyranoside were prepared by chemo-enzymic self-transfer reaction.

ST mannopyranoside transglycosidation alc mannosidase; oligosaccharide glycoside transglycosidation alc enzymic

IT 67-63-0, 2-Propanol, reactions 108-93-0, Cyclohexanol, reactions 111-27-3, 1-Hexanol, reactions 111-87-5, 1-Octanol, reactions 14898-79-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(mannosidase-transglycosidation of, with nitrophenyl mannopyranoside)

IT 4350-20-3P 16790-33-3P 22277-65-2P 56846-39-0P 63223-88-1P 73351-02-7P 140147-38-2P 142925-34-6P 143289-25-2P 150301-00-1P 150301-01-2P 152141-28-1P 152141-29-2P 152141-30-5P 152141-33-8P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

IT 9025-43-8, β-Mannosidase
RL: RCT (Reactant); RACT (Reactant or reagent)
(transglycosidation of mannopyranoside in the presence of)

IT 4221-99-2
RL: RCT (Reactant); RACT (Reactant or reagent)
(transglycosidation of mannopyranoside with, enzymic)

L38 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

AN 1992:531453 CAPLUS <<LOGINID::20080812>>

DN 117:131453

OREF 117:22839a,22842a

TI Enzymatic synthesis of alkyl and hydroxyalkyl β-D-mannopyranosides

AU Taubken, N.; Thiem, J.

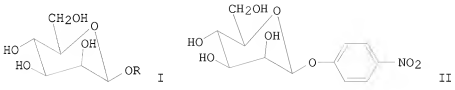
CS Inst. Org. Chem., Univ. Hamburg, Hamburg, D-2000/13, Germany

SO Synthesis (1992), (6), 517-18
CODEN: SYNTBF; ISSN: 0039-7881

DT Journal

LA English

OS CASREACT 117:131453
GI



I II

AB The preparation of anomerically pure alkyl and hydroxyalkyl β-mannopyanosides I [R = Me, Et, Me2CH, Bu, HOCH2CH2, HO(CH2)4, HO(CH2)6, HOCHMeCH2CH2] from 4-nitrophenyl β-mannopyranoside (II) and ROH by using the transfer activity of β-mannohydrolase [EC 3.2.1.25] is described.
TI Enzymatic synthesis of alkyl and hydroxyalkyl β-D-mannopyranosides
SO Synthesis (1992), (6), 517-18
CODEN: SYNTBF; ISSN: 0039-7881
AB The preparation of anomerically pure alkyl and hydroxyalkyl β-mannopyanosides I [R = Me, Et, Me2CH, Bu, HOCH2CH2, HO(CH2)4, HO(CH2)6, HOCHMeCH2CH2] from 4-nitrophenyl β-mannopyranoside (II) and ROH by using the transfer activity of β-mannohydrolase [EC 3.2.1.25] is described.
ST enzymic stereoselective transglycosidation nitrophenyl mannopyranoside alc; mannopyranoside alkyl hydroxyalkyl
IT Stereochemistry
(of enzymic transglycosidation of nitrophenyl mannopyranoside with alcs.)
IT Alcohols, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(stereoselective enzymic transglycosidation of, with nitrophenyl mannopyranoside)
IT Glycosidation
(trans-, enzymic, stereoselective, of nitrophenyl mannopyranoside with alcs.)
IT 107-88-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(enzymic transglycosidation of, with nitrophenyl mannopyranoside)
IT 22277-65-2P 73351-02-7P 142925-34-6P 143206-70-6P 143206-71-7P 143289-25-2P 143289-26-3P 143289-27-4P 143289-28-5P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
IT 67-63-0, 2-Propanol, reactions 71-36-3, Butanol, reactions 110-63-4, 1,4-Butanediol, reactions 629-11-8, 1,6-Hexanediol
RL: RCT (Reactant); RACT (Reactant or reagent)
(stereoselective enzymic transglycosidation of, with nitrophenyl mannopyranoside)
IT 9025-43-8
RL: RCT (Reactant); RACT (Reactant or reagent)
(stereoselective transglycosidation of nitrophenyl mannopyranoside with alcs. in presence of)

L38 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN

10594225

AN 1966:404213 CAPLUS <<LOGINID::20080812>>
DN 65:4213
OREF 65:780g-h,781a-b
TI Separation of sugar derivatives by partition chromatography on anion-exchange resins
AU Larsson, Lars Inge; Ramnas, Olle; Samuelson, Olof
CS Chalmers Tekn. Hogskola, Goteborg, Swed.
SO Analytica Chimica Acta (1966), 34(4), 394-400
CODEN: ACACAM; ISSN: 0003-2670
DT Journal
LA English
AB cf. CA 59, 2142c; 62, 15400f. Mixts. of 3-4 monosaccharides and 8-12 sugar derivs. (Me, Et, PhCH2, HOC2H4 ethers, glycosides), 6-70 γ each, are separated by chromatog. on columns (0.6-diameter + 69.5 or 95 cm.) of strongly basic anion exchange resins (T4, T5B; particle size 10-35, 3-17 μ; exchange capacity 3.7, 4.2 meq./g.; SO4- form), eluting with 94% EtOH (by weight) at 75°. Jacketed glass columns, and piston type pumps of stainless steel were used for feeding in the 75° eluant (Samuelson "Ion Exchange sepns. in Anal. Chemical," New York, John Wiley, 1963). A preheater was placed between the pump and the column. The eluate was analyzed continuously by means of a Technicon Automated analyzer using the orcinol method described previously (CA 59, 2142c; 63, 7199h). Using a 0.6 + 69.5 cm. column of the T4 resin, 2,3,6-tri-O-methyl-D-glucose (I), 3,6-di-O-methyl-D-glucose (II), Me β-L-arabinopyranoside (III), Me α-D-xylopyranoside (IV), 2-O-ethyl-D-glucose (V), 3-O-benzyl-D-glucose (VI), Me B-D-glucopyranoside (VII), L-fucose (VIII), 3-O-hydroxyethyl-D-glucose (IX), D-lyxose (X), D-arabinose (XI), and D-xylose (XlI) are separated with .apprx.950 mL. of 94% EtOH at a flow rate of 3.5 mL./cm.2/min. With more complicated mixts, containing very similar derivs., some of the elution bands overlapped. With such mixts. the use of the T5B high capacity resin (0.6 + 95 cm. column), in the same conditions, gave significant improvements; 12 sugar derivs., 3 pentoses and 1 deoxysugar are separated as peaks, with .apprx.2000 mL. of 94% EtOH. Using the T5B resin, the mutual separation of sugar derivs. and the monosaccharides from each other is more effective, owing to the greater selectivity as shown by the more favorable separation factors. The distribution coefficient, Dv, of the monosaccharides and sugar derivs. were calculated from the peak elution vols. by using VIII as a standard in each run. The separation factors (Dv of a solute/Dv of VIII) of 34 monosaccharides, sugar derivs, and glycosides were determined with the T4 and T5B columns as described. The separation factors of I-XII on the T4 and T5B columns are (I) 0.03, -; (1I)-0.08, 0.07; 0.17, 0.14; 0.23, 0.24; 0.33, 0.31; 0.50, 0.46; 0.77, -; (VIII) 1.00, 1.00; 1.33, -; 1.78, 1.93; 2.09, 2.30; 2.74, 3.04, resp. The Dv of VIII is 17.6 and 23.6 on the T4 and T5B resin, resp. The orders of elution of I, VI, VIII and XIII, as effected by the eluant (polar or less polar), in otherwise unchanged conditions, are (in H2O) I > VIII > XII > VI; (94% EtOH) I > VI > VIII > XII, resp.
SO Analytica Chimica Acta (1966), 34(4), 394-400
CODEN: ACACAM; ISSN: 0003-2670
AB cf. CA 59, 2142c; 62, 15400f. Mixts. of 3-4 monosaccharides and 8-12 sugar derivs. (Me, Et, PhCH2, HOC2H4 ethers, glycosides), 6-70 γ each, are separated by chromatog. on columns (0.6-diameter + 69.5 or 95 cm.) of strongly basic anion exchange resins (T4, T5B; particle size 10-35, 3-17 μ; exchange capacity 3.7, 4.2 meq./g.; SO4- form), eluting with 94% EtOH (by weight) at 75°. Jacketed glass columns, and piston type pumps of stainless steel were used for feeding in the 75° eluant (Samuelson "Ion Exchange sepns. in Anal. Chemical," New York, John Wiley, 1963). A preheater was placed between the pump and the column.

The eluate was analyzed continuously by means of a Technicon Automated analyzer using the orcinol method described previously (CA 59, 2142c; 63, 7199h). Using a 0.6 + 69.5 cm. column of the T4 resin, 2,3,6-tri-O-methyl-D-glucose (I), 3,6-di-O-methyl-D-glucose (II), Me β-L-arabinopyranoside (III), Me α-D-xylopyranoside (IV), 2-O-ethyl-D-glucose (V), 3-O-benzyl-D-glucose (VI), Me B-D-glucopyranoside (VII), L-fucose (VIII), 3-O-hydroxyethyl-D-glucose (IX), D-lyxose (X), D-arabinose (XI), and D-xylose (XiI) are separated with .apprx.950 mL. of 94% EtOH at a flow rate of 3.5 mL./cm.2/min. With more complicated mixts, containing very similar derivs., some of the elution bands overlapped. With such mixts. the use of the T5B high capacity resin (0.6 + 95 cm. column), in the same conditions, gave significant improvements; 12 sugar derivs., 3 pentoses and 1 deoxysugar are separated as peaks, with .apprx.2000 mL. of 94% EtOH. Using the T5B resin, the mutual separation of sugar derivs. and the monosaccharides from each other is more effective, owing to the greater selectivity as shown by the more favorable separation factors. The distribution coefficient, Dv, of the monosaccharides and sugar derivs. were calculated from the peak elution vols. by using VIII as a standard in each run. The separation factors (Dv of a solute/Dv of VIII) of 34 monosaccharides, sugar derivs, and glycosides were determined with the T4 and T5B columns as described. The separation factors of I-XII on the T4 and T5B columns are (I) 0.03, -; (1I)-0.08, 0.07; 0.17, 0.14; 0.23, 0.24; 0.33, 0.31; 0.50, 0.46; 0.77, -; (VIII) 1.00, 1.00; 1.33, -; 1.78, 1.93; 2.09, 2.30; 2.74, 3.04, resp. The Dv of VIII is 17.6 and 23.6 on the T4 and T5B resin, resp. The orders of elution of I, VI, VIII and XIII, as effected by the eluant (polar or less polar), in otherwise unchanged conditions, are (in H2O) I > VIII > XII > VI; (94% EtOH) I > VI > VIII > XII, resp.

IT 50-69-1, Ribose 58-86-6, Xylose 146-72-5, D-Glucose, 3-O-methyl- 154-17-6, D-arabino-Hexose, 2-deoxy- 527-52-6, D-Digitoxose 533-67-5, Ribose, 2-deoxy-, D- 612-05-5, Xylopyranoside, methyl, β-D- 617-04-9, Mannopyranoside, methyl, α-D- 709-50-2, Glucopyranoside, methyl, β-D- 1114-34-7, Lyxose, D- 1825-00-9, Arabinopyranoside, methyl, β-L- 2438-80-4, Fucose 2461-70-3, D-Glucose, 6-O-methyl- 3056-43-7, Glucopyranoside, methyl 4-O-methyl-, β-D- 3198-49-0, Glucopyranoside, ethyl, β-D- 3396-99-4, Galactopyranoside, methyl, α-D- 3615-41-6, Rhamnose 3615-47-2, D-Glucose, 2,3,4,6-tetra-O-methyl- 4132-38-1, D-Glucose, 4-O-methyl- 4132-40-5, D-Glucose, 2-O-methyl- 4234-44-0, D-Glucose, 2,3,6-tri-O-methyl- 4261-27-2, D-Glucose, 2,3-di-O-methyl- 5328-63-2, Arabinopyranoside, methyl, β-D- 6207-55-2, D-Glucose, 3,6-di-O-methyl- 10227-29-9, Glucopyranoside, methyl 2,3-di-O-methyl-, β-D- 10227-30-2, D-Glucose, 2,3-di-O- ethyl- 10230-13-4, D-Glucose, 6-O-(2-hydroxyethyl)- 10230-16-7, D-Glucose, 2-O-ethyl- 10230-18-9, D-Glucose, 3-O-(2-hydroxyethyl)-
(chromatog. of)

L38 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1964:425691 CAPLUS <<LOGINID::20080812>>
DN 61:25691
OREF 61:4458g-h,4459a
TI The acid hydrolysis of glycosides. I. General conditions and the effect of the nature of the aglycon
AU Timell, T. E.
CS McGill Univ., Montreal
SO Canadian Journal of Chemistry (1964), 42(6), 1456-72
CODEN: CJCHAG; ISSN: 0008-4042
DT Journal
LA Unavailable

AB First-order rate coeffs. and energies and entropies of activation have been determined for the acid-catalyzed hydrolysis of a number of Me D-glycopyranosides and disaccharides. The relation between the logarithm of the rate coeffs. and values for Hammett's acidity function was linear, although different for different acids. All compds. had entropies of activation indicating a unimol. reaction mechanism. Glucosides of tertiary alcohols were hydrolyzed very rapidly: e.g., triethylmethyl β-D-glucopyranoside hydrolyzed 30,000 times faster than the corresponding Me compound Increase in size of the aglycon caused a slight increase in the rate of hydrolysis of β-D-glucopyranosides; steric hindrance thus was of no significance. Electron-attracting substituents in the aglycon had little or no influence on the rate of hydrolysis; obviously because they would tend to lower the equilibrium concentration of the conjugate acid, while facilitating the subsequent heterolysis; the two opposing effects more or less canceled out. These results were discussed in connection with recent studies on the acid hydrolysis of various phenyl glycopyranosides and with reference to the postulated occurrence of an activating inductive effect in oligo- and polysaccharides containing carboxyl or other electroneg. groups at C-5. There is little evidence for the existence of any such effect and, for example, pseudoaldobiouronic acids should be hydrolyzed at the same rate as the corresponding neutral disaccharides.

SO Canadian Journal of Chemistry (1964), 42(6), 1456-72
CODEN: CJCHAG; ISSN: 0008-4042

IT 528-50-7, Cellobiose 554-91-6, Gentiobiose 585-99-9, D-Melibiose 612-05-5, Xylopyranoside, methyl, β-D- 617-04-9, Mannopyranoside, methyl, α-D- 709-50-2, Glucopyranoside, methyl, β-D- 1824-94-8, Galactopyranoside, methyl, β-D- 3198-49-0, Glucopyranoside, ethyl, β-D- 4304-12-5, Glucopyranoside, benzyl, β-D- 5284-99-1, Glucopyranoside, cyclohexyl, β-D- 5285-03-0, Glucopyranoside, neopentyl, β-D- 5391-17-3, Glucopyranoside, isopropyl, β-D- 5391-18-4, Glucopyranoside, butyl, β-D- 5391-20-8, Glucopyranoside, isobutyl, β-D- 5965-66-2, Lactose, D- 5994-13-8, Glucopyranoside, 2-hydroxyethyl, β-D- 6860-47-5, Xylobiose, D- 14417-51-7, Mannose, 4-O-β-D-mannopyranosyl-, D- 15761-61-2, Mannose, 4-O-β-D-glucopyranosyl-, D- 21568-96-7, Acetic acid, (β-D-glucopyranosyloxy)- 29074-04-2, Glucopyranoside, tert-butyl, β-D- 34384-77-5, Glucopyranoside, 1-propyl, β-D- 34384-79-7, Glucopyranoside, allyl, β-D- 90318-86-8, Glucopyranoside, 2-chloroethyl, β-D- 90820-11-4, Glucopyranoside, 2-methoxyethyl, β-D- 91423-08-4, Propionic acid, 3-(β-D-glucopyranosyloxy)- 92218-69-4, Glucopyranoside, 1,1-diethylpropyl, β-D-
(hydrolysis of)

L38 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2008 ACS on STN
AN 1962:463031 CAPLUS <<LOGINID::20080812>>
DN 57:63031
OREF 57:12599e-g
TI Reactions at position 1 of carbohydrates. III. The acidcatalyzed hydrolysis of glycosides
AU Overend, W. G.; Rees, C. W.; Sequeira, J. S.
CS Univ. London
SO Journal of the Chemical Society (1962) 3429-40
CODEN: JCSOA9; ISSN: 0368-1769
DT Journal
LA Unavailable
AB cf. CA 56, 10253c. The rates of acidcatalyzed hydrolyses of a range of glycopyranosides and of one glycofuranoside, were measured, mostly at

three or more temps.; the activation parameters were calculated The steric and electronic effects of changes in the sugar configuration, and in the nature and configuration of the aglycon, upon the rates of hydrolysis were discussed; the most significant changes were found in the entropy of activation and an explanation of these was proposed. For hydrolysis of all the pyranosides studied the entropies of activation were pos. and relatively large, supporting an A-1 mechanism, whereas for the furanoside it was neg., suggesting an A-2 mechanism. Independent evidence for the A-1 mechanism, based on the products of hydrolysis of methyl α- and β-D-glucopyranoside, was presented.

SO Journal of the Chemical Society (1962) 3429-40
CODEN: JCSOA9; ISSN: 0368-1769

IT 2500-78-9 4118-60-9 4229-54-3 14917-55-6 15486-24-5
18486-38-9 27821-03-0 37614-79-2 55263-78-0 65310-00-1
89615-03-2 89615-04-3 89615-05-4 89886-07-7 89886-08-8
90457-33-3 93983-79-0 98633-13-7
(Derived from data in the 7th Collective Formula Index (1962-1966))

IT 612-05-5, Xylopyranoside, methyl, β-D- 617-04-9,
Mannopyranoside, methyl, α-D- 709-50-2, Glucopyranoside,
methyl, β-D- 1464-44-4, Glucopyranoside, phenyl, β-D-
2492-87-7, Glucopyranoside, p-nitrophenyl, β-D 2818-58-8,
Galactopyranoside, phenyl, β-D- 2871-15-0, Galactopyranoside,
phenyl, α-D- 3162-96-7, Glucopyranoside, methyl
4,6-O-benzylidene-, α-D- 3198-49-0, Glucopyranoside,
ethyl, β-D- 3767-28-0, Glucopyranoside, p-nitrophenyl,
α-D- 4630-62-0, Glucopyranoside, phenyl, α-D- 13403-13-9,
Galactofuranoside, ethyl, β-D- 13566-32-0, Idopyranoside,
methyl 4,6-O-benzylidene-, α-D- 18997-88-1,
Galactopyranoside, ethyl, β-D- 906322-75-6,
Galactopyranoside, ethyl, α-D-
(hydrolysis of)

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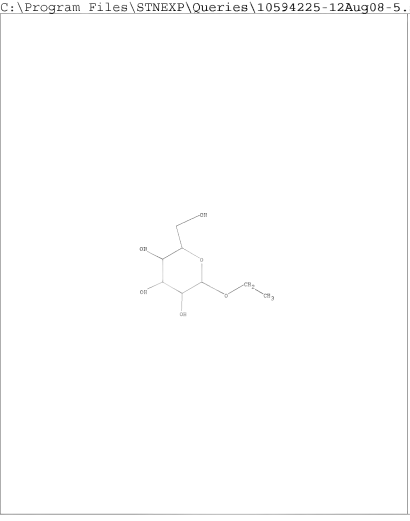

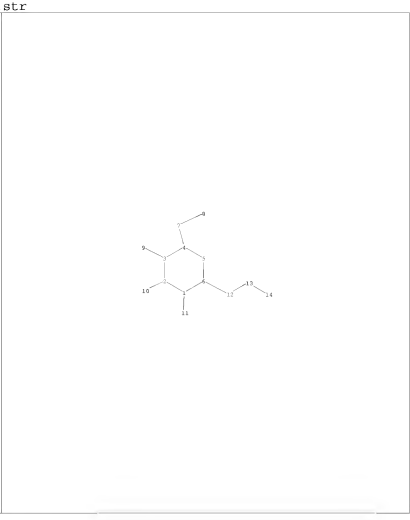

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ring nodes :
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chain bonds :
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ring bonds :
    1-2  1-6  2-3  3-4  4-5  5-6
exact/norm bonds :
    1-2  1-6  1-11  2-3  2-10  3-4  3-9  4-5  5-6  6-12  7-8
exact bonds :
    4-7  12-13  13-14


Match level :
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    12:CLASS  13:CLASS  14:CLASS
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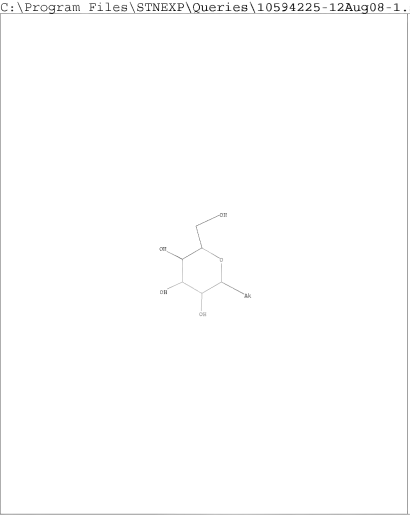

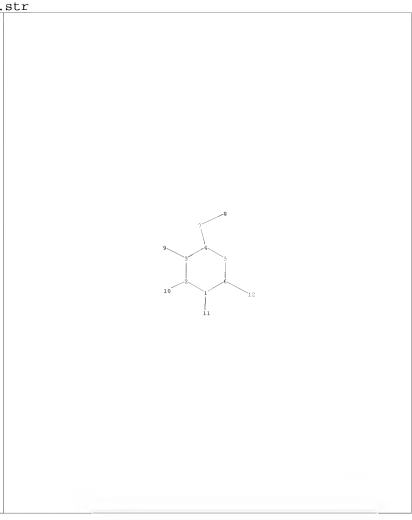

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chain nodes :
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ring nodes :
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chain bonds :
    1-11  2-10  3-9  4-7  6-12  7-8
ring bonds :
    1-2  1-6  2-3  3-4  4-5  5-6
exact/norm bonds :
    1-2  1-6  1-11  2-3  2-10  3-4  3-9  4-5  5-6  6-12  7-8
exact bonds :
    4-7


Match level :
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    12:CLASS
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